

1 18. The system of claim 18, wherein the distribution pattern includes at least one
2 data cluster and wherein the nanopore data analysis system is further operative
3 to:

4 analyze of the distribution of target polynucleotide data points between
5 the two data clusters;

6 comparing the distribution of the target polynucleotide data points
7 between the two data clusters to a phosphorylation state standard distribution;
8 and

9 determine a ratio of phosphorylated target polynucleotide to non-
10 phosphorylated target polynucleotides.

1 19. The system of claim 15, wherein the nanopore data analysis system is further
2 operative to:

3 determine a cluster score for the target polynucleotide data points in a
4 defined area; and

5 compare the cluster score for the target polynucleotide data points to a
6 cluster score for a chemical integrity standard density distribution for the
7 defined area in a distribution of a target polynucleotide standard.

1 20. The system of claim 15, wherein the nanopore data analysis system is stored
2 on a computer-readable medium.

1 ^{21.}
~~22.~~ The system of claim 15, further comprising:

2 means for analyzing the distribution of target polynucleotide data
3 points in the distribution pattern